UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,365	06/19/2006	Shunpei Yamazaki	0756-7752	6856

31780 7590 11/03/2009

ERIC ROBINSON
PMB 955
21010 SOUTHBANK ST.
POTOMAC FALLS, VA 20165

EXAMINER	
BELOUSOV, ALEXANDER	
ART UNIT	PAPER NUMBER
2894	

MAIL DATE	DELIVERY MODE
11/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,365	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	ALEXANDER BELOUSOV	2894	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *5-7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 8-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed on 04/20/2009. Currently, claims 1-4 and 8-14 have been examined. This is the same rejection as has been sent previously and the only new material is the ***Response to Arguments***.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claim(s) 1-4 & 8-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over (US-6509217) by Reddy in view of (US-2001/0038127) by Yamazaki et al ("Yamazaki") and further in view of (US-2005/0140539) by Fujieda et al ("Fujieda").

Regarding claim 1, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92), and wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose an insulating film over the conducting wire, and fine particles of a soft magnetic material are included in the insulating film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, an insulating film (215) and fine particles of a soft material (214; gold) are included in the insulating film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of an insulating film and fine particles of a soft material are included in the insulating film, wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing conductive resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with “via 108/110 made of an insulating film and fine particles of a soft material are included in the insulating film, wherein the material is iron”, it will result in “an insulating film (108 would be that film) over the conducting wire, and fine particles of a soft **magnetic** material (iron) are included in the insulating film”.

Regarding claim 2, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92), and wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose a resin film over the conducting wire, and fine particles of a soft magnetic material are included in the resin film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, a resin film (215) and fine particles of a soft material (214; gold) are included in the resin film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with “via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is

iron", it will result in "a resin film (108 would be that film) over the conducting wire (88, 96 & 92), and fine particles of a soft **magnetic** material (iron) are included in the resin film".

Regarding claim 3, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92),

a first insulating film (104) covering the conducting wire and the thin film transistor, and wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose a second insulating film over the first insulating film covering the conducting wire, and fine particles of a soft magnetic material are included in the second insulating film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, a second insulating film (215) and fine particles of a soft material (214; gold) are included in the second insulating film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of a second insulating film and fine particles of a soft material are included in the second insulating film,

wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing conductive resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with "via 108/110 made of a second insulating film and fine particles of a soft material are included in the second insulating film, wherein the material is iron", it will result in "a second insulating film (108 would be that film) over the first insulating film (104; 108 is in direct contact with it; hence, "over") covering the conducting wire, and fine particles of a soft **magnetic** material (iron) are included in the second insulating film".

Regarding claim 4, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92),

an insulating film (104) covering the conducting wire and the thin film transistor (it is in direct contact with both), and wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose a resin film over the insulating film covering the conducting wire, and fine particles of a soft magnetic material are included in the resin film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, a resin film (215) and fine particles of a soft material (214; gold) are included in the resin film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with “via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is iron”, it will result in “a resin film (108 would be that film) covering the conducting wire (88, 96 & 92), and fine particles of a soft **magnetic** material (iron) are included in the resin film”.

Regarding claim 8, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92),

a first insulating film (104) covering the conducting wire and the thin film transistor (it is in direct contact with both), and a second insulating film at least adjacent to a side of the conducting wire by interposing the first insulating film therebetween,

wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose a second insulating film at least adjacent to a side of the conducting wire by interposing the first insulating film therebetween, and fine particles of a soft magnetic material are included in the second insulating film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, a second insulating film (215) and fine particles of a soft material (214; gold) are included in the second insulating film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of a second insulating film and fine particles of a soft material are included in the second insulating film, wherein the material is iron, in order to simplify the processing steps of making the

device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing conductive resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with "via 108/110 made of a second insulating film and fine particles of a soft material are included in the second insulating film, wherein the material is iron", it will result in "a second insulating film (108 would be that film) at least adjacent to a side of the conducting wire (88, 96 & 92) by interposing the first insulating film (104) therebetween, and fine particles of a soft **magnetic** material (iron) are included in the second insulating film".

Regarding claim 9, Reddy discloses in FIG. 3 and related text, **e.g.**, a semiconductor device comprising:

a substrate (10),

an integrated circuit including a thin film transistor (column 10, lines 8-10),

an antenna having a conducting wire (88, 96 & 92),

an insulating film (104) covering the conducting wire and the thin film transistor (it is in direct contact with both),

wherein the integrated circuit and the antenna are formed over the substrate to be electrically connected to each other (they are connected to each other).

Reddy does not disclose a resin film at least adjacent to a side of the conducting wire by interposing the insulating film therebetween, and fine particles of a soft magnetic material are included in the resin film.

Yamazaki discloses in FIG. 4A and related text, **e.g.**, a resin film (215) and fine particles of a soft material (214; gold) are included in the resin film.

Fujieda discloses in FIG. 5 and related text, **e.g.**, soft magnetic particles (paragraph 105, "Fe").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with “via 108/110 made of a resin film and fine particles of a soft material are included in the resin film, wherein the material is iron”, it will result in “a resin film (108 would be that film) at least adjacent to a side of the conducting wire (88, 96 & 92) by interposing the insulating film (104) therebetween, and fine particles of a soft **magnetic** material (iron) are included in the resin film”.

Regarding claim 10, Reddy discloses in FIG. 3 and related text, **e.g.**, the integrated circuit and the antenna are formed over a flexible substrate (column 17, lines 4 & 5).

Regarding claim 11, Reddy discloses in FIG. 3 and related text, **e.g.**, the conducting wire (88, 92 & 96).

Regarding the process limitations recited in claim 11 ("formed by an electroplating method, an electroless plating method, a printing method, or a droplet discharging method"), these would not carry patentable weight in this claim drawn to a structure, because distinct structure is not necessarily produced.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In re Marosi et al., 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 12, Reddy discloses in FIG. 3 and related text, **e.g.**, the conducting wire (88, 92 & 96) includes a first conductor (92) and a second conductor (96) covering the first conductor.

Regarding claim 13, Reddy discloses in FIG. 3 and related text, **e.g.**, the second conductor (96).

Regarding the process limitations recited in claim 13 ("formed by an electroplating method, an electroless plating method, or a droplet discharging method"), these would not carry patentable weight in this claim drawn to a structure, because distinct structure is not necessarily produced.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In re Marosi et al., 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 14, the combination of Reddy, Yamazaki and Fujieda discloses the soft magnetic material is Fe; Co; Ni; an alloy including at least one of Fe, Co, and Ni; 3Y2O3.5Fe2O3 (YIG); Fe203; Fe-Si-Al alloy; Fe-Cr alloy; FeP alloy; a permalloy in which Ni or Ni-Fe alloy is added with at least one of Mo, Cu, Cr, and Nb; or a soft ferrite (see rejection of claims 1-4, 8 & 9).

Response to Arguments

1. Applicant's arguments filed on 04/20/2009 have been fully considered but they are not persuasive.

2. **Regarding claims 1-4 and 8-14**, the Applicant argues on pages 3-5 that "one of ordinary skill in the art at the time of the present invention ***would not have had sufficient reason*** to combine Reddy and Yamazaki '127 in the manner proposed in the Official Action", and that "Reddy is ***directed to an RFID tag*** or the like and Yamazaki '127 is ***directed to a liquid crystal display*** device or the like" (see bottom of page 4).

The Applicant's arguments against the motivation to combine are not persuasive. The thrust of Applicant's argument seems to be that the two references are from two very different areas of the art and therefore teachings of one are not applicable to the other. In this the Applicant is incorrect, since he is defining the "related art" too narrowly. Please note that the Reddy reference deals with thin film transistors (for example, see "thin film technology" in the Abstract). The Yamazaki reference also deals with the thin film transistors (for example, see "TFT" in the Abstract). Therefore, the two references are dealing with fundamentally the same technology. The argument that just because one reference deals with ***an RFID tag*** and the other reference deals with ***a liquid crystal display***, that the two references would not be combinable is unreasonable since the two references deal with ***the same*** underlying technology. The only difference is specific application.

Therefore, since the two references refer to the same area of art (as was demonstrated above), the only question that is left is whether there is a ***sufficient reason*** to combine them. The MPEP 2142-2143.01 (as quoted by the Applicant on

page 2), states in part that "Obviousness can only be established ... where there is some reason to do so found either explicitly or ***implicitly*** in there references themselves or in the ***knowledge generally available*** to one of ordinary skill in the art".

In the instant case the Examiner has stated in the motivation to combine that the combination "would simplify the processing steps involved, since curing conductive resin ***is much simpler than*** depositing metal". The Examiner's statement clearly qualifies as the reason to combine that is ***implicitly*** taught in the reference and is ***knowledge generally available*** to one of ordinary skill in the art, since the two reference explicitly teach the two methods and the knowledge of which method is simpler is "knowledge generally available" to the designers of devices (hence, it is "implicitly" taught). Or, does the Applicant wish to argue that the person of ordinary skill in the art is not aware which method of manufacturing is simpler?

To state the above in a different way, please consider the same section of MPEP that the Applicant has already quoted (MPEP 2143) and look specifically at the "C. Use of ***Known Technique*** to Improve Similar Devices (***Methods***, or Products)" The Examiner's motivation to combine is clearly the invocation of the above rationale. The Examiner states that the motivation to combine is to "simplify the processing steps involved" (hence, "Use of ***Known Technique***") and that "curing conductive resin is much simpler than depositing metal" (hence, dealings with "***Methods***"). The MPEP 2143 also states that use of such rationale requires (1) "a finding that the prior art contained a "base" method" (such method was taught by Reddy, and the Examiner referred to it; see rejection of independent claims and the motivation to combine); (2) a

finding that the prior art contained a “comparable” method (such method was taught by Yamazaki, which taught a different method of making vias, and the Examiner referred to it; see rejection of independent claims and the motivation to combine); (3) a finding that one of ordinary skill in the art ***could have*** applied the known "improvement" technique in the same way to the "base" device (that is precisely the Examiner's argument); (4) whatever additional findings … may be necessary” (none are; it is a clear case of "Use of Known Technique to Improve"). Therefore, all the required parts of the reason to combine due to “Use of Known Technique to Improve Similar Devices” were present in the original rejection.

Hence, since the two references are from the ***same*** area of art (as was demonstrated above) and there is clearly a ***sufficient reason*** to combine the reference, the Applicant arguments are found to be not persuasive.

3. **Regarding claims 1-4 and 8-14**, the Applicant argues on pages 5-6 that it would not be obvious to "further modify the ***gold*** conductive particles 214 of Yamazaki ‘127 by instead using the ***iron*** particles or crystal grains of … Fujieda” (see page 5), because the two are used for different purposes: Yamazaki's particles are used for electrically connecting parts of a circuit and Fujieda's particles are used to absorb electromagnetic waves. Therefore, the Applicant argues “the Official Action has not demonstrated **why** one ... would have had any reason to modify a particle used for electrically connecting a terminal and a wiring with a magnetic particle used to absorb electromagnetic waves or why the electromagnetic wave absorbing function of Fujieda would have been useful or necessary in Reddy and/or Yamazaki ‘127, much less in the vias 108, 110 of Reddy"

(see page 6).

The Applicant's arguments are not persuasive. The most basic, fundamental and self-obvious reason for replacing ***gold*** with ***iron*** is **cost**. This is explicitly stated by the Examiner in his motivation to combine. The Examiner is confident that the Applicant will agree that the reduction in the cost of materials is a great reason to replace one type of particle with another. A person of ordinary skill in the art knows that iron and gold are conductors of electricity and that iron is much, much, much cheaper than gold. In the extremely competitive marketplace it is always obvious to reduce the cost of the device, provided that the device will still function. In the instant case, one conductor of electricity is replaced with another. Hence, presuming that the designer did her job (by checking the necessary figures and formulas, etc), the device will still function. Hence, the reason to combine appears to be extremely solid.

4. **Regarding claims 1-4 and 8-14**, the Applicant argues on page 6 that the composition of the material ***is different*** between the Yamazaki and Fujieda.

The Applicant's arguments are not persuasive. First of all, whether the composition of material is different or the same is not relevant in and of itself. Does the Applicant wish to argue that this somehow makes Fujieda reference unusable? This is not clear from the Applicant's arguments.

Second of all, the Fujieda's reference is used to simply teach iron, which is a well known conductor of electricity and has the benefit of being much cheaper than gold. Therefore, the composition of the material is not a relevant consideration regardless of Applicant's potential arguments, since the Examiner does not rely on Fujieda to teach

composition, but to merely teach iron.

5. **Regarding claims 1-4 and 8-14**, the Applicant argues on page 6 that "an anisotropic conductive material would ***not*** be suitable for the vias 108, 110, because the anisotropic conductive material contains a resin, which means the conductivity thereof ***would be less*** than that of pure metal".

The Applicant's arguments are not persuasive. A material, in order to function as the via, has to be able to conduct electricity. Yamazaki clearly teaches that the material is a conductor of electricity and therefore is a suitable material (see rejection of the independent claims above). The ***degree*** of conductivity is not relevant, as long as the device still functions. The device clearly still functions in Yamazaki's case. Therefore, the argument that "the material would ***not*** be suitable", can not be persuasive, since it clearly is suitable as conductor.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Belousov whose telephone number is 571-270-3209. The examiner can normally be reached on Monday - Thursday 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Nguyen can be reached on 571-272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Belousov/
Examiner, Art Unit 2894
10/26/2009

/Kimberly D Nguyen/
Supervisory Patent Examiner, Art Unit 2894